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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/320,252	05/26/1999	PAUL EVAN MATZ	02950.P033	4390

7590 10/21/2004

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EXAMINER

ENGLAND, DAVID E

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/320,252		MATZ ET AL.	
	Examiner		Art Unit	
	David E. England		2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 5, 7 - 13, 15 - 17, 19, 20 and 24 - 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 5, 7 - 13, 15 - 17, 19, 20 and 24 - 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 5, 7 – 13, 15 – 17, 19, 20 and 24 – 27 are presented for examination.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4, 7 – 13, 15, 17, 19, 20 and 24 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundaresan (6289369) in view of Cota-Robles (6658447).
3. Referencing claim 1, Sundaresan teaches a method of executing a transaction task within a transaction processing system, the method including:
 4. responsive to an event, identifying a workflow associated with the event, (e.g. col. 2, line 48 – col. 3, line 9 & col. 3, lines 22 – 37); and
 5. identifying a processor affinity attributed to the task, (e.g. col. 4, line 63 – col. 5, line 29);
 6. assigning the available thread to a processor within the multiprocessor system according to the processor affinity attributed to the task, (e.g. col. 3, line 55 – col. 4, line 14 & col. 8, line 48 – col. 9, line 19);
 7. distributing a task, that at least partially executes the workflow, from a task queue to an available thread within a pool of threads operating within a multiprocessor system, (e.g. col. 5,

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line 49 – col. 6, line 7, “*central queue, local queue(s)*”). Sundaresan does not specifically teach the distributing the task responsive to dynamically assigning a new priority to the task. Cota-Robles teaches the distributing the task responsive to dynamically assigning a new priority to the task, (e.g. col. 5, lines 37 – 64 & col. 7, lines 16 – 56). It would have been obvious to one skilled in the art at the time the invention was made to combine Cota-Robles with Sundaresan because if a new task that has a higher priority enters a queue, it would be advantageous to the system to address the new task first in the thread so the system can utilize the important result of the finished thread.

8. As per claim 2, Sundaresan teaches wherein the event comprises a transaction event and the task comprises a transaction task responsive to a transaction request associated with the transaction event, (e.g. col. 5, lines 30 – 48).

9. As per claim 4, Sundaresan teaches the transaction task comprises a transaction information task to either store or retrieve information pertinent to a transaction, (e.g. col. 7, line 56 – col. 8, line 27).

10. As per claim 7, Sundaresan does not specifically teach assigning the available thread to a processor within the multiprocessor system according to a thread priority. Cota-Robles teaches assigning the available thread to a processor within the multiprocessor system according to a thread priority, (e.g. col. 1, lines 1 – 44 & col. 7, line 16 – 56). It would have been obvious to one skilled in the art at the time the invention was made to combine Cota-Robles with Sundaresan.

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because of similar reasons stated above and if a thread that has important information that other threads rely on does not get processed first it could cause errors in the system.

11. As per claim 8, Sundaresan does not specifically teach assigning the thread priority to the available thread based on a priority, of the task distributed to the available thread. Cota-Robles teaches assigning the thread priority to the available thread based on a priority, of the task distributed to the available thread, (e.g. col. 1, lines 1 – 44 & col. 7, line 16 – 56). It would have been obvious to one skilled in the art at the time the invention was made to combine Cota-Robles with Sundaresan because of similar reasons stated above and if an incoming task that is important, needs to be completed first, it could be sent to the next available thread within the pool of threads therefore, causing the thread to have the same priority as the task therefore having the task be processed sooner.

12. As per claim 24, Sundaresan teaches determining a best match between the task and the available thread, (e.g. col. 3, line 55 – col. 4, line 16).

13. As per claim 25, Sundaresan teaches the available thread is a member of a class of threads that are included in the pool of threads, (e.g. col. 6, lines 8 – 29 & col. 8, line 48 – col. 9, line 4) although does not specifically teach threads associated with the priority. Cota-Robles teaches threads associated with the priority, (e.g. col. 4, line 53 – col. 5, line 30). It would have been obvious to one skilled in the art at the time the invention was made to combine Cota-Robles with Sundaresan because of similar reasons stated above.

14. Claims 9 – 13, 15, 17, 19, 20, 26 and 27 are rejected for similar reasons as stated above.

15. Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundaresan (6289369) in view of Cota-Robles (6658447) in further view of Szlam et al. (6314089) (hereinafter Szlam).

16. As per claim 3, Sundaresan and Cota-Robles do not specifically teach wherein the transaction task comprises a transaction routing task that routes the transaction request associated with the transaction event to an agent of the transaction processing system. Szlam teaches wherein the transaction task comprises a transaction routing task that routes the transaction request associated with the transaction event to an agent of the transaction processing system, (e.g. col. 21, lines 1 – 19). It would have been obvious to one skilled in the art at the time the invention was made to combine Szlam with the combine system of Sundaresan and Cota-Robles because if a transaction task needed a resource that an agent possessed the transaction task could request it from the agent therefore aiding in the completion of the task.

17. Claim 16 is rejected for similar reasons as stated above.

18. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sundaresan (6289369) in view of Cota-Robles (6658447) in further view of Sequeira (6222530).

19. As per claim 5, Sundaresan and Cota-Robles do not specifically teach wherein the task has a real-time priority and is distributed in accordance with the real-time priority to the available thread within the pool of threads. Sequeira teaches wherein the task has a real-time priority and is distributed in accordance with the real-time priority to the available thread within the pool of threads, (e.g. col. 5, line 46 – col. 6, line 6 & col. 9, lines 16 – 31). It would have been obvious to one skilled in the art at the time the invention was made to combine Sequeira with the combine system of Sundaresan and Cota-Robles because if an incoming task that is important, needs to be completed first, it could be sent to the next available thread within the pool of threads before the other tasks and be processed sooner.

Response to Arguments

20. Applicant's arguments, see pages 10 – 13, filed 07/02/2004, with respect to drawing objections and 112 rejections have been fully considered and are persuasive. The objection to the drawings and 112 rejection of claims 1, 2, 4 and 17 have been withdrawn.

21. Applicant's arguments filed 07/02/2004 in regards to 103 rejections have been fully considered but they are not persuasive.

22. In the remarks, Applicant argues in substance that Sundaresan in combination with Cota-Robles does not teach or suggest every limitation of claims 1, 2, 4, 7 – 13, 15, 17, 19, 20 and 24

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– 27 as required to support rejections of the independent claims of the present application under 35 U.S.C. § 103(a).

23. As to part 1, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

24. In the remarks, Applicant argues in substance that Sundaresan in combination with Cots-Robles does not teach or suggest dynamically assigning a priority to a task; but rather, providing a priority for a thread. The thread described above is different from a task because the thread described above is already executing on a SMT processor, rather than waiting on a task queue.

25. As to part 2, Examiner would like to draw the Applicant's attention to the cited areas that are mentioned above, more specifically sections in Cots-Robles that describe the instruction and the threads that could be interpreted as the Applicant's claimed thread and tasks.

26. Applicant is reminded when reviewing a reference the applicants should remember; not only the specific teachings of a reference but also reasonable inferences which the artisan would have logically drawn therefrom may be properly evaluated in formulating a rejection. In re Preda, 401 F. 2d 825, 159 USPQ 342 (CCPA 1968) and In re Shepard, 319 F. 2d 194, 138 USPQ 148 (CCPA 1963). Skill in the art is presumed. In re Sovish, 769 F. 2d 738, 226 USPQ 771 (Fed. Cir. 1985). Furthermore, artisans must be presumed to know something about the art apart from what the references disclose. In re Jacoby, 309 F. 2d 513, 135 USPQ 317 (CCPA 1962). The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference.

In re Bozek, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969). Every reference relies to some extent on knowledge of persons skilled in the art to complement that which is disclosed therein. In re Bode, 550 F. 2d 656, 193 USPQ 12 (CCPA 1977).

27. Furthermore, columns 11 – 13 in Cots-Robles discusses the specifics of “the distributing the task responsive to dynamically assigning a new priority to the task”, (for example, Table 2 & col. 12, line 8 – 67, “... *a branch instructions enters the pipeline for thread A.*”, “*Once dynamic priorities have been determined, the processor selects 334 instructions for processing on the next clock cycle according to the determined dynamic priorities.*”, “... *dynamic priority with RR tie breaking...*”). These and other areas of the cited prior art teach the claimed invention as broadly interpreted by the scope of the claim language.

Conclusion

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

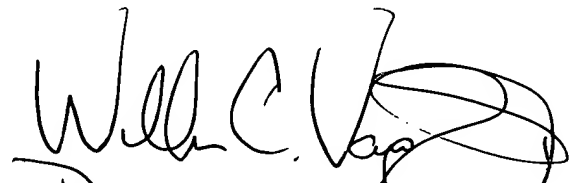
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 703-305-5333 and 571-272-3912 as of Oct. 28th. The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David E. England
Examiner
Art Unit 2143

De



Primary Examiner
Art Unit 2143
William C. Vaughn, Jr.